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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/057,126

10/25/2001

Kai Tuschner

MWS-042RCE2

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11/26/2008

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EXAMINER

BASEHOAR, ADAM L

ART UNIT

PAPER NUMBER

2178

MAIL DATE

DELIVERY MODE

11/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/057,126	Applicant(s) TUSCHNER ET AL.	
	Examiner ADAM L. BASEHOAR	Art Unit 2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12 and 14-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12 and 14-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 August 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the Amendment filed 08/12/08.
2. The rejection of claims 10-11 and 14-18 under 35 U.S.C. 101 has been withdrawn as necessitated by Amendment.
3. The objection to the specification has been withdrawn as necessitated by Amendment.
4. Claims 1-3, 5-12, and 14-29 are pending in this case. Claims 1, 10, 19, 23, and 27 are independent claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5-12, and 14-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aptus et al. (US-7,114,149 09/26/06) in view of Dori (US-7,099,809 08/29/06)

-In regard to substantially similar independent claims 1, 10, 19, 23, and 29, Aptus teaches a method, system, means, and program product for generating source code from a block diagram model (column 5, lines 55-67: "modifications made on the displays 204....all modifications are made directly to the source code...change is made to the source code via the graphical representation"; column 17, lines 56-58: "used to develop source code in a project"), the generating comprising:

a processor and memory (column 6, lines 34-45: "processor...memory")(Fig. 6);

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including in the generated source code one or more comments that identify a reference to an element in the block diagram model (column 21, lines 65-67; column 22, lines 1-13: “includes a reproduction of comments inserted into the source code”; column 23, lines 3-35: “the ‘see’ parameter”)(Figs. 20, 24, & 25);

generating a code generation report (e.g. Fig. 2: 206 & Fig. 20: 2008) from the generated source code, the generating of the code generation report comprising (column 5, lines 46-62; column 21, lines 65-67; column 22, lines 1-13 & 46-51):

parsing the one or more comments in the generated source code (column 22, lines 46-67: “generates the textual portion of the HTML documentation...by parsing the source code and comments in the source code”; column 23, lines 1-35: “comments”);

displaying the code generation report (column 5, lines 46-62: “source code is being displayed in both a graphical form and a textual form”; column 21, lines 1-10 & 34-43: “viewing and navigation through the documentation...HTML documentation is begin displayed by a web browser”)(Fig. 20).

Aptus further teaches generating links between the HTML diagrammatic and the textual portions of the documentation to facilitate navigation through and viewing of the documentation (column 3, lines 31-39; column 21, lines 26-33). To accomplish this, Aptus teaches generating and mapping HTML hyperlinks in the diagram model to associated portions in the textual description (column 23, lines 34-67; column 24, lines 1-30)(Fig. 21: 2112). Aptus also teaches utilizing the ‘see’ comment parameter in the HTML documentation to link to associated block elements (column 23, lines 25-35)(Fig. 25: i.e. note that the See Also: “My Thread” element is underlined in the HTML document to imply hyperlink navigation to one of ordinary skill in the

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art). However, Aptus does not specifically recite replacing the one or more comments with a hypertext link, wherein the hyperlinks were in the textual description and by selecting the hyperlink the corresponding associated block diagram model element was displayed. Dori teaches maintaining an equivalence between a diagram model and a textual description for said diagram model (column 3, lines 3-67: "maintain the equivalence": column 4, lines 1-4)(Fig. 1: 102 & 104), wherein the diagram model and textual description are linked in such a way that when a user selects a textual portion with a cursor, the corresponding element in the diagram model is highlighted and displayed (column 4, 8-14: "highlight graphic constructs corresponding to the sentence...and vice-versa"). It would have been obvious to one of ordinary skill in the art at the time of the invention for the user of Aptus to have been able to select a hyperlink in the textual description and have been shown the corresponding diagram model element as shown in Dori, because Dori teaches that by providing said bi-directional linking functionality the user of Aptus would gain the benefit of a "better understanding of the correspondence between graphics and text" (column 4, lines 10-14).

-In regard to dependent claims 2, 11, and 28, Aptus teaches receiving input from a user representing a selection of the at least one hyperlink text (column 24, lines 4-29: "generates a hyperlink reference fro rectangular area 2012 to the portion of the textual documentation that corresponds...user may navigate to the exact part...by moving the mouse arrow inside of rectangular box 2012 and left clicking"); and

displaying to the user at least a portion of the textual documentation including the element of the model associated with the hyperlink text (column 24, lines 4-29: "automatically

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navigates to and displays the corresponding portion of the HTML textual documentation in the frame displaying the textual documentation”).

Aptus teaches linking between the diagrammatic and the textual portions of the documentation to facilitate navigation and view of the documentation (column 3, lines 29-39) by establishing hyperlinks in the diagram model to portions in the textual description (column 23, lines 34-67; column 24, lines 1-21)(Fig. 21: 2112). Aptus does not specifically teach wherein the hyperlinks were in the textual description and by selecting the hyperlink the corresponding associated block diagram model element was displayed. Dori teaches maintaining an equivalence between a diagram model and a textual description for said diagram model (column 3, lines 3-67: “maintain the equivalence”: column 4, lines 1-4)(Fig. 1: 102 & 104), wherein the diagram model and textual description are linked in such a way that when a user selects a textual portion with a cursor, the corresponding element in the diagram model is highlighted and displayed (column 4, 8-14: “highlight graphic constructs corresponding to the sentence...and vice-versa”). It would have been obvious to one of ordinary skill in the art at the time of the invention for the user of Aptus to have been able to select a hyperlink in the textual description and have been shown the corresponding diagram model element as shown in Dori, because Dori teaches that by providing said bi-directional linking functionality the user of Aptus would gain the benefit of a “better understanding of the correspondence between graphics and text” (column 4, lines 10-14).

-In regard to dependent claims 3 and 12, Aptus does not teach wherein displaying to the user at least a portion of the block diagram model comprises displaying the associated

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element in a highlighted fashion. Dori teaches maintaining an equivalence between a diagram model and a textual description for said diagram model (column 3, lines 3-67: “maintain the equivalence”: column 4, lines 1-4)(Fig. 1: 102 & 104), wherein the diagram model and textual description are linked in such a way that when a user selects a textual portion with a cursor, the corresponding element in the diagram model is highlighted and displayed (column 4, 8-14: “highlight graphic constructs corresponding to the sentence...and vice-versa”). It would have been obvious to one of ordinary skill in the art at the time of the invention for the user of Aptus to have been able to select a hyperlink in the textual description and have been shown the corresponding diagram model element highlighted as shown in Dori, because Dori teaches that by providing said bi-directional linking functionality the user of Aptus would gain the benefit of a “better understanding of the correspondence between graphics and text” via the highlighting (column 4, lines 10-14).

-In regard to dependent claims 5 and 14, Aptus teaches parsing the generated source code (column 22, line 48: “parsing the source code”) which could include a plurality of variables (column 8, line 55: “variables”; column 13: “local variables...several variables”; column 15)(Fig. 20: 2008) to generate HTML documentation (column 22, lines column 21, lines 65-67; column 22, lines 1-14 & 46-67; column 23, lines 1-35), wherein the HTML documentation contained hyperlinks between the HTML documentation and the associated block diagram model (column 21, lines 2-10; column 23, lines 34-67; column 24, lines 1-21)(Fig. 21: 2112) . Aptus does not specifically teach that parsing replaces a variable reference with a hypertext link to an associated element in the block diagram model. Dori teaches maintaining an equivalence between a

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diagram model and a textual description for said diagram model (column 3, lines 3-67: "maintain the equivalence": column 4, lines 1-4)(Fig. 1: 102 & 104), wherein the diagram model and textual description are linked in such a way that when a user selects a textual portion with a cursor, the corresponding element in the diagram model is highlighted and displayed (column 4, 8-14: "highlight graphic constructs corresponding to the sentence...and vice-versa"). It would have been obvious to one of ordinary skill in the art at the time of the invention for the user of Aptus to have been able to select a hyperlink in the textual description representing a variable reference and have been shown the corresponding diagram model element as shown in Dori, because Dori teaches that by providing said bi-directional linking functionality the user of Aptus would gain the benefit of a "better understanding of the correspondence between graphics and text" (column 4, lines 10-14). Additionally Aptus teaches wherein the parsing selected informative portions to be described in the textual documentation (column 23, lines 3-35), which would have been obvious to have included source code variable, because Aptus taught it would have thus enhanced to the reader of the source code how the variable was supposed to be used (column 13: "obtains information about how the variable is supposed to be used").

-In regard to dependent claims 6 and 15, Aptus teaches wherein the hypertext link is SGML (column 21, lines 2-24: "HTML to provide navigation links"; column 23, lines 52-67: "hyperlinks are a well-known feature of HTML"; column 24, 1-29: i.e. HTML was a notoriously well known application of SGML).

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-In regard to dependent claims 7 and 16, Aptus teaches wherein the hypertext link is HTML (column 21, lines 2-24: "HTML to provide navigation links"; column 23, lines 52-67: "hyperlinks are a well-known feature of HTML"; column 24, 1-29).

-In regard to dependent claims 8 and 17, Aptus teaches wherein the hypertext link was HTML (column 21, lines 2-24: "HTML to provide navigation links"; column 23, lines 52-67: "hyperlinks are a well-known feature of HTML"; column 24, 1-29). Aptus does not specifically teach wherein the hyperlink was XML. It would have been obvious to one of ordinary skill in the art at the time of the invention for the document hyper-linking system of Aptus to have included an XML hyperlink, because it was notoriously well known in the art at the time of the invention that XML hyperlinks (i.e. XLinks) offer a far greater degree of functionality than those offered by HTML in that they were well known to offer extended links which provided multidirectional linking. Thus the user of Aptus would have been provided the benefit of multidirectional linking between the code generation report and the block diagram model (e.g. a functionality that was shown in the Dori reference (column 4, lines 8-15)).

-In regard to dependent claims 9, 18, and 29, Aptus teaches wherein the at least one comment listing a reference to a block comprises a character string identifying a path to file providing information relating to a section of the block (column 23, lines 1-35: "comments...parameters are special fields within comments...'see' parameter is used to refer to other classes or class members that are related to or that should be referenced with regard to the

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class...associated with the 'see' parameter...referring to the 'My Thread' class")(Figs. 20, 24, & 25).

-In regard to dependent claims 20-23, Aptus teaches wherein the storage medium could be a RAM, ROM, and a hard disk drive (column 6, lines 46-52: "hard disks...RAM or ROM").

-In regard to dependent claims 24-26, Aptus teaches wherein the processor (Fig. 6: 608: "processor") and the memory (Fig. 6: 602: "memory") could be incorporated in a personal computer (column 6, lines 34-53: "data processing system 600")(Fig. 6), network server capable of Internet communication (column 6, lines 34-53: "data processing system 600...Internet")(Fig. 6). Aptus does not specifically teach wherein the data processing system (Fig. 6) was a single board computer. It would have been obvious to one of ordinary skill in the art at the time of the invention for the processing system of Aptus to have been a single board computer, because single board computers were notoriously well known in the art at the time of the invention to provide reduced weight and lower power consumption which thus increased the potential for portability of the processing system of Aptus. The user of a single board computer would thus provide predictable results to that of the data processing system as described in Aptus.

Response to Arguments

6. Applicant's arguments filed 08/12/08 have been fully considered but they are not persuasive.

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-In regard to claims 1-3 and 5-9, Applicant argues that neither Aptus nor Dori teach or suggest "generating source code from a block diagram model. The Examiner respectfully disagrees with the Applicant. Aptus clearly teaches wherein source code 202 was generated from user edits to the block diagram model 204 (column 5, lines 55-67: "modifications made on the displays 204....all modifications are made directly to the source code"). Aptus teaches that modifications made to graphical form 204 (i.e. which is equivalent to a block diagram model) are then directly made to the source code via the incremental code editor (column 62-67: "change is made to the source code via the graphical representation"). Dori also teaches wherein source code was generated from a block diagram model (Abstract: "including automatic code generation"; column 2, lines 57-57-58: "are listings of code automatically generated from the diagram"; column 15, lines 14-31: "direct transformation...to executable code that materializes the system's functionality through software"). In Dori, the block diagram model and the text are both equivalent and synchronized such that both are directly related to creating the generated source code.

Applicant also argues that neither Aptus nor Dori teach or suggest "including in the generated source code one or more comments that identify a reference to an element in the block diagram model" and "replacing the one the one or more comments with a hypertext link that refers to the element of the block diagram model identified by the comment." The Examiner respectfully disagrees with the Applicant. Aptus clearly teaches including in the generated source code one or more comments that identify a reference to an element in the block diagram model (column 21, lines 65-67; column 22, lines 1-13: "includes a reproduction of comments inserted into the source code"; column 23, lines 3-35: "the 'see' parameter")(Figs. 20, 24, & 25).

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The Examiner notes that the source code graphical diagram of Aptus (Fig. 2: 204: “graphical...representations of the source code”; Fig. 20: 2006: “diagram portion”) is equivalent to the block diagram model as currently claimed. While not relied upon the Examiner, it is further noted that the Dori reference also teaches including in the generated source code one or more comments that identify a reference to an element in the block diagram model (Note: Figs. 30 and 32-35 which show the automatically generated code listing of a user defined block diagram)(Abstract: “including automatic code generation”; column 2, lines 57-57-58: “are listings of code automatically generated from the diagram”; column 15, lines 14-31: “direct transformation...to executable code that materializes the system’s functionality through software”).

As discussed above in the rejection of the claims, Aptus further teaches generating links between the HTML diagrammatic and the textual portions of the documentation to facilitate navigation through and viewing of the documentation (column 3, lines 31-39; column 21, lines 26-33). To accomplish this, Aptus teaches generating and mapping HTML hyperlinks in the diagram model to associated portions in the textual description (column 23, lines 34-67; column 24, lines 1-30)(Fig. 21: 2112). Aptus also teaches utilizing the ‘see’ comment parameter in the HTML documentation to link to associated block elements (column 23, lines 25-35)(Fig. 25: i.e. note that the See Also: “My Thread” element is underlined in the HTML document to imply hyperlink navigation to one of ordinary skill in the art). However, Aptus does not specifically recite replacing the one or more comments with a hypertext link, wherein the hyperlinks were in the textual description and by selecting the hyperlink the corresponding associated block diagram model element was displayed. Dori teaches maintaining an equivalence between a diagram

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model and a textual description for said diagram model (column 3, lines 3-67: "maintain the equivalence": column 4, lines 1-4)(Fig. 1: 102 & 104), wherein the diagram model and textual description are linked in such a way that when a user selects a textual portion with a cursor, the corresponding element in the diagram model is highlighted and displayed (column 4, 8-14: "highlight graphic constructs corresponding to the sentence...and vice-versa"). It would have been obvious to one of ordinary skill in the art at the time of the invention for the user of Aptus to have been able to select a hyperlink in the textual description and have been shown the corresponding diagram model element as shown in Dori, because Dori teaches that by providing said bi-directional linking functionality the user of Aptus would gain the benefit of a "better understanding of the correspondence between graphics and text" (column 4, lines 10-14).

-In regard to claims 10-12 and 14-29, Applicant makes substantially similar arguments as those presented above in view of claims 1-3 and 5-9.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam L. Basehoar whose telephone number is (571)-272-4121. The examiner can normally be reached on M-F: 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Adam L Basehoar/
Primary Examiner, Art Unit 2178